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A FEW SUGGESTIONS ON BIRD NOTES AND THEIR SONGS.

By Charles de B. Green and J. Hooper Bowles.

The question of bird notes and songs is not an easy one to study. However, a few facts seem to me to stand out in considerable prominence, and these I hope to show as they sound or occur to me.

It seems to me as though the "timbre," or quality, of the whole system of bird notes and songs must be structural, because we so often get the same quality all through a genus. For example, the Golden Oriole of Europe builds a nest and lays eggs exactly like giant vireos, but the bird itself can be known at once for an oriole by the quality of its voice, even though the refrain is so different from those of our orioles here in America. The Nutcracker and the Raven are evident relations by their voices. On the other hand, a Williamson's Sapsucker has the same scream as a Western Red-tailed Hawk, but with a different voice. Is this an unvarying rule, and, if so, have the larynxes been carefully compared? Certainly an interesting study for ornithologists who have the time, acuteness of hearing, and musical ability to work it out.

How much should a difference of refrain weigh in the separation of subspecies, if it should be considered at all? To me? To me? It sometimes forms a very obvious difference as a means of field identification. It will also be a hard question to solve whether a difference of refrain may be present in two subspecies, or even a difference in timbre, whether the human ear may be able to detect it or not. The love song must have a great deal of influence in bringing closely allied species and subspecies together during the mating season, and an illustration of my point may be found in the two northwestern forms of the Ruby-crowned Kinglets. After spending thirty years among the Ruby-crowned Kinglets in their mainland breeding grounds of British Columbia, and the Sitkan Kinglets in their island homes, one naturally becomes thoroughly certain of their notes. The summer of 1921 was spent upon Porcher Island, in latitude 53 degrees, where the Sitkan Kinglet was found to be breeding from sea level upward. The quality of the note was identical to that of the Ruby-crowned Kinglet of the interior mainland, as far as my human ears could detect, but the refrain was quite different. Never once does the Ruby-crown give the Sitkan song, nor vice versa. After listening to the Sitkan Kinglet for a month during the breeding season, it would be impossible ever to mistake its song for that of the Ruby-crown. The refrain never seems to vary, and it never forgets its difference by dropping into the Ruby's chatter. It is little use to attempt rendering any bird song by articulate sounds, but dactyls and spondees will give some idea of the difference between any two. Thus we can render the song of the Ruby-crown as follows: - - - - - u-u, u-u, u-u.

The Sitkan is as follows: - - - - - u-uu-uu-u--, as song No. 1; while as often as not, it gives another song, simply: -uu,-uu,-uu-, the last spondees in each case being high, loud notes, and not at all like the preliminary stutter. Note that where the preliminary canter is left out the refrain always ends in a lone spondee.

On mentioning the taking of a nest of the Sitkan Kinglet on Porcher Island to a celebrated ornithologist, he informed me that it is a question whether all of the western Ruby-crowns are not the same. Does such a well defined and constant difference in the refrain tell us nothing? It certainly must count for a great deal with the birds at the season when they are selecting their mates.